

# ALAKANUK HEALTH CLINIC



## Alaska Rural Primary Care Facility Code and Condition Survey

Final  
July 23, 2001



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## **I. Executive Summary**

### **Overview:**

The Alakanuk Clinic, built in 2000, is 28' x 64' building and one vestibule for a total of 1861 SF. It is one of the new clinics that YKHC has constructed in the last year based on size and funding constraints of ICDBG funding. It has an arctic entry, waiting/reception room, one trauma/exam room, three exam/office rooms, one administrative/records office, one pharmacy/lab, one specialty clinic/health education/conference/exam room, one storage room, one HC toilet room, one HC toilet/bath room, janitor room, one mechanical room. The front entry has a vestibule, stair, and ramp, and the rear entry with no vestibule and a stair. The building is of designed with 6" plywood panelized with roof trusses, 11" roof panels, and TJI floor joists with 6" panels on the underside for a simple utilidor system. The foundation is glu-lam beams on 6 x 6 treated wood post and pad system directly on the silty sandy pad. The pad needs upgrading to gravel topping. It is serving one of the larger growing villages in the YKHC region with over 500 residents, currently 652 residents. It should be recognized that the community has grown over 20% in the last 10 years.

### **Renovation/Upgrade and Addition:**

The existing Clinic will require a 640 SF addition to accommodate the current need and Alaska Rural Primary Care Facility space guidelines. This addition would require some reconfiguration of the site and additional new fill and pad work. There would also need to be some minor upgrade to the existing pad and clinic such as door replacement due to break-in. As can be seen from the documentation enclosed, the existing clinic is in new condition and requires very few code or condition upgrades. The major cost is for the additional space to meet the guidelines. The cost of renovation and addition will not exceed 75% of the cost of a new clinic facility and therefore the minor code items should be completed and an addition should be planned to meet the space guidelines

### **New Clinic:**

The city has participated in the building of the new clinic and would participate in the addition required to meet the needs of the community. The current site, adjacent to the new post office, and central to the community other city facilities, is ideal. The community has proposed that an addition be provided to upgrade the new existing clinic from 1860 sf to the new larger 2500 SF Denali Commission Large Clinic on the existing site. We have included preliminary site plan for this site and the addition to 2500 SF clinic.

The site has all existing utilities and is in easy access to the entire community and other community related facilities

The community has completely supported the efforts over the last several years and has met extensively to assist in the existing new clinic project. They have committed to participate in any addition plans in the same way.

## **II. General Information**

### **A. The Purpose of the Report and Assessment Process:**

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility assessment, planning, design and construction. Over 200 clinics will be inspected through the course of the program. The purpose of the Code and Condition survey report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2. The information gathered will be tabulated and analyzed according to a set of fixed criteria that should yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring the clinics up to a uniform standard of program and construction quality.

A team of professional Architects and Engineers traveled to the site and completed a detailed Field Report that was reviewed by all parties. Subsequently, the team completed a draft and then final report of the facility condition.

### **B. Assessment Team:**

Tom Humphrey, Capital Projects Director, and Senka Paul, the administrator for Yukon Kuskokwim Health Corporation, organized the assessment team. The team for this site visit was Gerald L. (Jerry) Winchester, Architect, Winchester Alaska, Inc.; Bob Jernstrom, PE, Jernstrom Engineering, and Hugh Denny, ANTHC. Team members who assisted in preparation of report from information gathered included members of the field team above and Ben Oien PE, Structural Engineer; Eric Cowling, PE, Electrical Engineer; Carl Bassler PE, Civil Engineer; and Estimations, Inc.

### **C. Report Format:**

The format adopted is a modified "Deep Look" format, a facilities investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. The written report includes a floor plan of the clinic, site plan as available, and new plans for renovation/upgrade or completely new clinics. Additional information was gathered during the field visit which includes a detailed Field Report and building condition checklist, sketches of building construction details, investigations of potential sites for new or replacement clinics, and proposed plans for village utility upgrades. This information is available for viewing at ANTHC's Anchorage offices and will be held for reference.

### **D. The Site Investigation:**

On July 2, 2001, the team flew to the site and made observations, took photos, and discussed the needs with on-site personnel for the facility. Approximately three hours was spent on site, with sufficient time to investigate foundations, structure, condition, mechanical and electrical systems, and to interview the staff

to assess current and projected health care needs. Though this was a compressed time frame on site due to weather, the team was well rehearsed in collecting the data and was able to get all needed information.

Interviews were conducted with the Bertha, Ida, Bernita, Ethel Philip, Health Aides and Administrators, and other city residents. The city and tribal staff and YKHC provided information on the existing building, site, and utilities. Additional review of existing data from YKHC files from physician's assistants, community health aides, travel clerks, dentists, specialty clinic providers, and medivac teams. These interviews provided clear understanding of the needs of the village, the clinic facility, and the users of the facility.

The Alakanuk community has reviewed the use of a Denali Commission Large Health Clinic design adapted to the Alakanuk Site. The site will accommodate the new addition to the existing new clinic nicely and would provide the additional space needed to meet the community requirements.

## **II. Clinic Inspection Summary**

### **A. Community Information:**

Population: 645 (2000 Census)

2<sup>nd</sup> class City, Unorganized Borough, Lower Yukon School District, Calista Corporation

#### **Location:**

Alakanuk is located at the east entrance of Alakanuk Pass, the major southern channel of the Yukon River, 15 miles from the Bering Sea. It is part of the Yukon Delta National Wildlife Refuge. It lies 8 miles southwest of Emmonak, approximately 162 air miles northwest of Bethel. It is the longest village on the lower Yukon - the development stretches over a 3-mile area along the Pass. Approximately 25 homes along the bank are being threatened by erosion. It lies at approximately 62d 41m N Latitude, 164d 37m W Longitude (Sec. 14, T030N, R082W, Seward Meridian). The community is located in the Bethel Recording District. The area encompasses 35 sq. miles of land and 6 sq. miles of water.

#### **History:**

Alakanuk is a Yup'ik word meaning "wrong way," aptly applied to a village on this maze of watercourses. The village was first reported by G.R. Putnam of the U.S. Coast & Geodetic Survey in 1899. It was originally settled by a Yup'ik shaman named Anguksuar and his family. A Catholic mission school was built near the village. A post office was established in 1946. In 1948, the school was relocated to St. Mary's, and many families moved from the old school site to Alakanuk. It incorporated as a second-class city in 1969.

#### **Culture:**

Alakanuk is a Yup'ik Eskimo village active in commercial fishing and subsistence. The sale, importation and possession of alcohol are banned in the village.

#### **Economy:**

Alakanuk experiences a seasonal economy with most activity occurring during summer. 77 residents hold commercial fishing permits. Many have gill net permits, and set net fishermen sell their salmon to Seattle fish buyers. Poor fish returns since 1998 have significantly affected the community. Government employment and retail businesses provide year-round employment.

Salmon, beluga whale, seal, moose and rabbit provide food sources. Some residents trap. Many residents travel to Emmonak to shop and attend social events and basketball tournaments.

**Facilities:**

Water is derived from the Alakanuk Slough, is treated, stored in a tank, and piped to most of the community. In 1998, 83 homes, the school and teachers' housing were connected to a new piped system. New facilities include a water treatment plant, heated 300,000-gal. water storage tank, vacuum sewage plant, sewage lagoon, arctic piping, and household plumbing. A new subdivision is currently underway, and nine homes will be connected to the piped utilities. There are 25 unserved homes that are threatened by riverbank erosion; they use rain catchments or haul from the water storage tank, honeybuckets and pit privies. These homes will be moved and replaced by the BIA in 2001. The landfill uses an incinerator to reduce the volume of refuse.

**Transportation:**

A State-owned 2,200' gravel airstrip is available. An airport relocation project is underway, due to erosion. Alakanuk is easily accessible from the Yukon River and Bering Sea by barge and riverboat. Most passengers and mail arrive by air. There are no roads connecting Alakanuk with other population centers in the region, but ice roads are used in winter. Snowmachines and boats are used for local travel.

**Climate:**

The climate of Alakanuk is subarctic, averaging 60 inches of snowfall and 19 inches of total precipitation per year. Temperatures range from between -25 to 79. Heavy winds are frequent during the fall and winter. The River is used as an ice road during freeze-up, from November through May.

**B. General Clinic Information:****Physical Plant Information:**

The existing new Alakanuk Clinic was completed in 2000 and occupies 1861 sq. ft. (See attached Plan) It is one of the larger size clinics constructed along with 4 other clinics in 2000 by YKHC from ICDBG grants in 1999. It has a waiting room with public toilet access and with direct gurney access from the exterior into the trauma/exam room. There are three additional exam rooms and secondary toilet for patient privacy and staff. The janitor room, pharmacy and coffee bar alcove are all accessible from the waiting room. The administration/records/office is located with easy observation of the entry and waiting room. There is an additional specialty/exam room for itinerant staff and specialty clinics. There is a storage room as well as storage in each exam room, telecom racks are located in the rear with the mechanical room adjacent.

The front stairs and ramp need some completion work and the site needs additional gravel topping to provide for minimal mud entering the facility. There is need for additional office space, itinerant sleeping room, storage and space for itinerant storage as well. The addition of 385 SF would provide these spaces missing in the existing facility.

**Clinic program usage information:**

Patient records indicate the clinic sees an average of 451 patients per month in 2000, and 360 patients per month in 1999 and in 1998. This is an over a 25% increase in patient encounters in the last two years. There are 4 full or part time staff and 1 Itinerant or contract staff equivalent. The office space provided is not adequate and all the office functions, travel, files, and use by all

health aides is accomplished in the single office area. All three exam rooms were in use on the day of our field investigation for the entire time we were at the clinic. The custodian had to mop of clean the floor over a dozen times due to the muddy condition on the site.



**C. Program Deficiency Narrative:**

## 1. Space Requirements and Deficiencies:

**Space Comparison Matrix - Current Alakanuk Actual SF to Denali Commission Large Clinic**

Alaska Rural Primary Care Facility

Purpose / Activity	Current Clinic						Large Clinic					
	Designated Itinerant			Actual Net SF			ARPCF SF			Difference		
	Size	No.	Net Area (SF)		No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)
Arctic Entries					55	1	55	50	2	100		45
Waiting/Recep/Closet	150	1	150		233	1	233	170	1	170		-63
Trauma/Telemed/Exam	200	1	200		135	1	135	200	1	200		65
Office/Exam				103, 103,	99	3	305	150	2	300		-5
Admin./Records					153	1	153	110	1	110		-43
Pharmacy/Lab					62	1	62	80	1	80		18
Portable X-ray							0	40	1	40		40
Specialty Clinic/Health Ed/Conf					96	1	96	150	1	150		54
Patient Holding/ Sleeping Room							0	150	1	150		150
Storage	150	1	150	72, 5 @ 10sf	6	122	120	1	120			-2
HC Toilet					69, 67	2	136	60	2	120		-16
Janitor's Closet					26	1	26	30	1	30		4
Subtotal Net Area			500				1323			1570		247
Circulation & Net/Gross Conv. @ 45%							501			707		206
Subtotal (GSF)							1824			2277		453
Mechanical Space @ 8%					37	1	37			182		145
<b>Total Heated Space</b>			<b>500</b>				1861			2459		598
			0									
Morgue (unheated enclosed space)								30	1	30		30
Ext. Ramps, Stairs, Loading				HC Accessible		As Required			As Required			As Required

- Overall space deficiencies: The size of the facility is about 640 SF short of the ARPCF space requirements
- Specific room deficiencies: The facility needs another vestibule, additional office space, specialty storage, an itinerant sleeping space to meet the ARPCF guidelines.
- Other size issues: The mechanical room is very tight and needs additional space. There is no current unheated space for dry.

## 2. Building Issues:

- Arctic Entries - The main entry is accessible for ADA and it is possible to get a gurney into the room. It has a legal ramp and door width to provide accessibility. The rear entry has a stair and compliant railings. The ramp needs to be extended to grade versus the piled up dirt currently used to access the ramp. The front stairs need an additional stringer for support per the original plans.



- b. Waiting / Reception – The waiting area contains all new furniture and is very comfortable. It could use some additional furniture when the clinic is full of patients. There is a coffee bar, and easy access to toilet facilities and to the health aid check-in through the office. The office has good visibility of the waiting room.
- c. Exam / Trauma – There is a exam/trauma room directly thought the waiting room with direct and straight gurney access from the front entry. The trauma room is a bit small by the storage room in the corner that could be removed to provide the full size room per the ARPCF guidelines.
- d. Office/Exam room – There are three smaller exam rooms with very adequate space for normal operation. The sink cabinets have been poorly installed and need adjustment and re-sealing to the walls. The rooms also need privacy curtains or blinds no the windows.
- e. Office / Administration / Records – This room has a two desks, copier, fax, a single patient chair, and considerable storage. There is a sliding glass window to the waiting room that does provide adequate privacy for patient interviews and phone calls. The record storage could use a bit more room and the electrical is very adequate.
- f. Pharmacy / Lab – There is a Pharmacy for medicines and they are all stored in locked cabinets in the storage room.
- g. Specialty Clinic / Health Education / Conference – This function is completed the fourth exam room at the far end of the corridor. It is very adequate and serves for variety of specialty needs and does not interrupt basic clinic function when used.
- h. Patient Holding / Sleeping Room – There is no sleeping room and only a rollaway bed for itinerant staff.
- i. Storage – Storage is adequate and is contained in the main storage in the rear and in 10sf storage rooms adjacent to each exam room. There are good shelving and storage systems available for easy storage and access.
- j. HC Toilet Facilities – There are two toilet rooms, one serves patients and the other clinic staff and patients as required. One of the rooms has a fully ADA compliant bathtub. All facilities are fully ADA compliant.
- k. Janitors Room – There is a room that has a janitor's sink and is totally separate from other functions for easy access.
- l. Mechanical/Boiler room – The Mechanical room is a separate room and is not used for any type of storage. It is fully code compliant.
- m. Ancillary Rooms – There are no ancillary rooms, however, each room is used very efficiently.

### 3. Functional Design Issues

This facility is functionally adequate for its current intended use. The spaces meet the functional size requirement; sanitation and patient care requirements to meet delivery needs.

The facility provides the ability to perform required medical functions easily and safely for the patients and staff.

#### 4. Health Program Issues

a. Patient comfort and privacy:

The front door of the clinic is through a large vestibule that is adequate to defer the heat loss. The second exit from the end of the hallway no vestibule, however, it is distant from patients and is not used for normal access, only emergency. There is good patient privacy since all the doors are screened and each room had privacy curtains that can be drawn around the patient area.

b. Medical/Infectious Waste

This is being handled in a basic method burning on site generally.

c. Infection Control

This is being completed with very good long-term control due to new facility, new materials, current standards of surfaces for easy cleaning, and adequate cleaning facilities. All materials are good commercial quality including the sheet vinyl floor, rubber base; fiber reinforced plastic (FRP) wainscot, and painting systems.

d. Insect and Rodent Control

None noted or investigated

e. Housekeeping

The cleaning and housekeeping is being done easily, however, the muddy site presents considerable problems and required the custodian to be mopping or sweeping the floor every 15 –20 minutes. This problem could be resolved with gravel topping at the entry.

#### 5. Utilities

a. Water Supply

The piped system for the entire village from central system is very adequate.

b. Sewage Disposal

Sewer system is provided by vacuum piped system to lagoon.

c. Electricity

See Electrical Narrative

d. Telephone

A single phone line services the clinic and is inadequate for current needs.

e. Fuel Oil

The fuel system is very adequate with new double wall tanks that meet all DEC requirements.

### D. Architectural / Structural Condition

#### 1. Building Construction:

a. Floor Construction:

The floor is 16 " TJI joist @ 16" oc spanning 28' and resting on 5 1/8" x 24" glu-laminated beams. The floor has a 6" insulated foam panel soffit providing a utilidor space under the entire building for present and future access to plumbing and utilities. The floor is 3/4" plywood with underlayment and final finish. The floor support beams are supported with treated 6 x 6 posts with adjustable hardware for re-leveling of floor periodically. The simple two rows of supports make leveling a very easy project. The posts are supported by double 4 x 12 pads that are buried 1'0" for uplift. All of the piping is contained interior to the facility in the above ceiling heated space or in the heated utilidor soffit.

b. Exterior Wall Construction:

The walls are 6" insulated plywood panel construction. The supports for the roof trusses are at 4' 0" oc. The system is covered with vapor retarder and horizontal metal siding. The interior has a vapor barrier and gypsum wallboard, painted. The R-value is 30+.

c. Roof Construction:

The roof is a full-span truss at 48" oc with 10" insulated plywood panel, ice and water shield, and commercial metal roof. The insulation is approximately R60+ and the ceiling is a 4' x 8' suspended ceiling with sound attenuation blankets at all partition walls 4' both ways.

d. Exterior Doors:

The exterior doors are residential insulated metal. They are in poor shape and have been kicked in recently. They should be replaced with commercial quality insulated hollow metal doors per the original drawings with all new hardware and deadbolts.

e. Exterior Windows:

Windows are vinyl thermo-pane windows with full arctic hardware and ease of opening.

f. Exterior Decks, Stairs, and Ramps

The main Arctic entry is adequate and the secondary exit needs a vestibule. The landing, stairs, railings meet all current codes and are constructed of treated material and grip-strut treads. The front stairs need an additional stringer for support per the original drawings.

2. Interior Construction:

a. Flooring:

The flooring is new commercial sheet vinyl over plywood. It meets all sanitary requirements.

b. Walls:

The walls are of 3 " metal stud, with full sound insulation, gypsum wallboard and paint. This type of wall construction does provide for good patient privacy. There are a couple cracks due to settlement and floor should be re-leveled and walls repaired.

c. Ceilings:

The ceilings are suspended acoustic tile ceilings with sound attenuation blanket at all partitions for additional sound control. The ceilings are easy to keep clean and provide easy access to all system located above including water lines, ventilation system, and power and telecom systems.

- d. Interior doors:  
The interior doors are solid core wood and provide good sound isolation and need door strikes in some locations. They are fully ADA accessible and the hardware meets ADA requirement.
- e. Casework:  
The upper casework is commercial quality Herman Miller systems as is all the casework and movable furniture. The system furniture provides easy shifts in medical needs for supplies and equipment in the correct locations.
- f. Furnishings:  
The furnishings are all-new and are looking new with no signs of wear in the first year.
- g. Insulation:

Floor Insulation		R-30
Wall Insulation	R-30	
Attic/Roof Insulation		R-60
Attic Ventilation		No attic/none required.
- h. Tightness of Construction:  
The facility is extremely tight construction with the foam panel construction and the front doors need strong closures to close due to tightness. The ventilation system works well providing code minimum air changes for a very sanitary environment.
- i. Arctic Design:  
The one vestibule is acceptable and second is needed. Orientation and siting are all-good and provide for well-done arctic design.

### 3. Structural

- a. Foundations  
The foundation is treated 6 x 6 posts on 4 x 12 pads for support with lateral bracing for wind and seismic. There are hold down and anchorage as required.
- b. Walls and Roof:  
The walls, roof and all systems are new and working well.
- c. Stairs, Landings, and Ramps  
These elements are in good condition and do not need replacement, only the addition of the ramp section and additional stringer on the stair.

## E. Mechanical Condition

### 1. Heating System

- a. Fuel Storage and Distribution  
The clinic's heating fuel oil storage tank is located adjacent to the building as required by code. The 660-gallon storage tank does have the proper venting, piping, and valving as required by code.

- b. Fuel Storage and Distribution  
The Toyostove heating fuel oil storage tank is located adjacent to the building and not a minimum of 5 ft. as required by code. The 55-gallon storage barrel does not meet UL tank standards nor does it have the proper venting, piping, or valving as required by code.
  - c. Furnace  
A single commercial grade, oil-fired furnace provides heating for the entire clinic. The furnace is in good shape with all required controls and a duct system to meet the needs of the Health Clinic. The furnace stack and the vent assembly is in good condition. There is a combustion air opening for the furnace.
  - d. Oil-Fired Heater  
One residential grade, oil-fired, "Toyostove" provides auxiliary heating for the clinic. The heater is in good shape. The combustion air opening for the heater is provided in the intake and exhaust kit provided with the unit.
  - e. Heat Distribution System  
The furnace supply air duct distribution system is routed through the ceiling plenum space. The return air makes its way back to the furnace through the clinic rooms and corridor. The supply air diffusers are located in the ceiling.
2. Ventilation System
- a. System  
There is a source of mechanical ventilation in the clinic. Ventilation is by an outside air duct into the furnace plenum. A set amount of outside air is introduced into the furnace plenum and from there into the supply air ductwork. The amount of outside air was determined by the occupancy of the clinic. Upon inspection, the outside air duct was plugged and needs to be reopened.
  - b. Exhaust Air  
Ceiling mounted exhaust fans service the toilet room and janitor's room. These fans are ducted outside, through the ceiling plenum, to a roof hood.
3. Plumbing System
- a. Water System  
The water system plumbing is typical ½" and ¾" copper distribution piping to the clinic exam sinks and toilet fixtures.
  - b. Sewer System  
A city vacuum sewer system provides the needs of the clinic. The vacuum sump and valve are located under the clinic in an insulated enclosure box.
  - c. Fixtures  
The toilet room plumbing fixtures are ADA approved for barrier free access. The janitor's sink is provided with a code required vacuum breaker.
  - d. Water Heater  
The water heater is installed on a non-combustible floor in the mechanical room. The water heater has been installed in a code required manner.

## F. Electrical Condition

1. Electrical Service
  - a. The electrical service is an overhead connection to the building with a meter/main disconnect on the exterior of the building. The meter/main is Nema 3R.
  - b. The service is a 200 Amp, 120/240V, 1 Ph, 3 wire.
  - c. An interlock and male receptacle is provided for future connection of standby generator.
2. Power Distribution
  - a. The MDP is a 200 Amp Cutler Hammer PRL/a Load Center 1C96649G06 with 42 poles total of which 10 are spare.
  - b. Type XHHW #3/0 copper power cables are routed from the main disconnect to the MDP.
  - c. The branch circuit wiring is installed in MC cable with redundant ground. From the photographs it is not possible to verify if medical rated MC cable was used in the patient care areas.
3. Grounding System
  - a. The building has a grounding electrode conductor routing from the meter base to a ground rod. The metallic piping systems are not bonded. The telephone ground tapped into the building electrode conductor but it is not supported.
4. Exterior Elements
  - a. HID exterior light fixtures are installed at the building entries entry. The design drawings specified time clock/photocell control that is not present in the photographs provided.
  - b. One GFCI protected exterior power receptacle is installed.
  - c. Telephone service enters at a weatherproof protection test block on the exterior of the building.
5. Electrical devices and lighting
  - a. Receptacles are hospital grade grounding type.
  - b. The lighting is predominately 2 ft x 4 ft fluorescent T8 (2) and (4) lamp troffers. Support rooms are compact fluorescent fixtures.
  - c. Interior device plates are non-metallic ivory decorative plates.
  - d. All rooms except for the lobby area is controlled by occupancy sensing wall light fixture switches.
6. Emergency System
  - a. Emergency egress illumination is provided by integral battery module in the area lighting (This will require verification).

- b. Illuminated egress signage is provided. (secondary power source will require verification).
- 7. Fire Alarm System
  - a. Line voltage powered smoke detector/Sounder/Strobes were installed to provide partial coverage. (Secondary power source will require verification)
- 8. Telecommunication
  - a. A voice telephone system is installed consisting of 6 lines provided by Unicom.
  - b. A data network raceway system and cabling is provided. Cables are coiled up at the patch panel and outlet ready for termination.

### G. Civil / Utility Condition

- 1. Location of building
  - a. Patient Access  
Located in the relative center of the village for ease of access and seems to work fine. It is off of the main road to the airport that is an advantage.
  - b. Service Access  
Road access is provided to front and rear entry. Stair and ramp access are adequate.
  - c. Other Considerations:  
The facility is located on a flat site and is a good location but soils are sandy, silty, dirt and additional gravel should be used to upgrade the foundation.
- 2. Site Issues
  - a. Drainage  
Drainage from the site is adequate, just the need for gravel topping to improve drainage and reduce mud.
  - b. Snow  
There does not appear to be a snow-drifting problem as the facility sits in the open.
- 3. Proximity of adjacent buildings  
There are no other buildings on the site and plenty of room for expansion.
- 9. Utilities
  - a. Water Supply  
The city piped water system is very adequate and serves well.
  - b. Sewage Disposal  
The city vacuum piped sewer system to the lagoon is adequate.
  - c. Electricity  
Power from Village system via overhead wire. See Photos



- d. Telephone  
Overhead phone with only one phone connection, requiring fax and phone on same line.

#### **H. Existing Facility Floor Plan (Site Plan if available):**

We have attached drawings, as we have been able to identify, find, or create as part of this report. We have endeavored to provide all drawings for all the sites; however, in some cases exact existing site plans were not available. We have provided as indicated below:

- A1.1 Existing Site Plan is attached if available
- A1.2 Existing Facility Floor Plan is attached following.
- A1.3 The Existing typical wall section is attached following as required by the report guidelines.
- A2.1 The New Clinic Site plan is attached as proposed based on the community input.
- A2.2 The Addition to the Existing Facility as required to meet ARPCF Space Guidelines is attached following.

## IV. Deficiency Evaluation

### A. Deficiency Codes:

The deficiencies are categorized according to the following deficiency codes to allow the work to be prioritized for funding. The codes are as follows:

- 01 Program Deficiencies:** Based on assessment of the facility's ability to support the stated services that are required to be provided at the site.
- 02 Fire and Life Safety Deficiencies:** Based on the identified areas where the facility is not in compliance with provisions of the state building codes including, UBC, UFC, NFPA 101, UMPC, NEC. These are organized sequentially from Architectural
- 03 General Safety:** Based on items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices.
- 04 Environmental Compliance:** Based on non-conformance with DEC regulations, hazardous materials and general sanitation.
- 05 Program Deficiencies:** These are items that are required for delivery of the medical services model currently accepted for rural Alaska. This may include space requirements, functional needs, or other items to meet the delivery of quality medical services.
- 07 Disability Access Deficiencies:** Items not in compliance with the Americans with Disabilities Act.
- 08 Energy Conservation:** These are items that are required for energy conservation and good energy management.
- 09 Plant Management:** This category is for items that are required for easy and cost efficient management and maintenance of the Physical Plant.
- 10 Architectural M & R:** Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, and general condition of interiors, and prevention of deterioration of structure and systems.
- 11 Structural M & R:** Deficiencies and items affecting the integrity of the building. These include foundations, roof and wall structure, materials used, insulation, vapor retarders, attic and crawlspace ventilation, and general condition of interiors.
- 12 Mechanical M & R:** Deficiencies in plumbing, heating, ventilation, air conditioning, or medical air systems.
- 13 Electrical M & R:** Deficiencies with electrical generating, distribution, fire alarm, and communications systems.
- 14 Utilities M & R:** Deficiencies with the utilities hook-ups, systems, and distribution.

**15 Grounds M & R:** Deficiencies with the civil site issues, drainage, access, etc.

**16 Painting M & R:** Deficiencies of painting, exterior, interior, trim and soffit.

**17 Roof M & R:** Deficiencies in roofing, and related systems including openings.

**18 Seismic Mitigation:** Deficiencies in seismic structural items or other related issues to seismic design including material improperly anchored to withstand seismic effect.

### **B. Photographs:**

We have provided photographs attached which are noted to describe the various deficiencies described in the narratives and itemized in the summary below. The photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report who are not familiar with the facility.

We have included additional photos as Appendix B for general reference. These are intended to add additional information to the specific deficiencies listed and to provide general background information.

## C. Cost Estimate General Provisions

### 1. New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

- Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.
- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

## **2. Remodel, Renovations, and Additions**

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

**V. Summary of Existing Clinic Deficiencies**

The attached sheets document the deficiencies; provide recommendations on how to make repairs or accommodate the needs and provide a cost estimate to accomplish the proposed modifications. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project there would be cost efficiencies that are not reflected in this tabulation.

These sheets are reports from the Access Data Base of individual Deficiencies that are compiled on individual forms and attached for reference.

Refer to Section VI. New Clinic Analysis for a comparison of remodel/addition to new construction.



## VI. New Clinic Analysis

The analysis of whether a new clinic is required is based on the Denali Commission standard of evaluation that "New Construction is viable if the cost of Repair/Renovation and Addition exceeds 75% of the cost of New Construction".

We have therefore determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for a size of village. We have also determined the cost of Repair/Renovation & Addition to the existing Clinic to meet the same ARPCF Space Guidelines.

A. The cost of a New Denali Commission 2500 SF Large Clinic in Alakanuk is projected to be:

• Base Anchorage Construction Cost per s.f.		\$185
• Project Cost Factor:	@ 45%	\$ 83
Medical Equipment	17%	
Construction Contingency	10%	
Design Fees	10%	
Construction Administration	8%	
• Multiplier for Village	@ 1.70	\$186
Adjusted Cost per SF		\$451

**Projected Cost of a New Clinic: 2500 s.f. X \$451 = \$1,127,500**

B. The cost of the Repair/Renovation and Additions for the existing Clinic are projected to be:

• Code & Condition Repairs/Renovations		
Cost from Deficiency Summary		\$141,871
• Remodel/Upgrade work		
0 of clinic 1058 SF @ \$86/SF		\$ 0
• Additional Space Required by ARPCF – (See Def. Code 05)		
○ Base Anchorage Cost		\$183
Additional Costs –		\$115
Medical Equipment	17%	
General Requirements	20%	
Estimation Contingency	15%	
○ Multiplier for Village	@ 1.70	\$210
Adjusted Cost per SF		\$508
Total Addition Cost of 640 SF @ \$508		\$325 248
• Project Cost Factor:	@ 28%	\$130,793
Construction Contingency	10%	
Construction Administration	8%	
Design Fees	10%	

**Total cost of remodel/addition \$597,912**

C. Comparison of Existing Clinic Renovation/Addition versus New Clinic:

**Ratio of Renovation/Addition versus New Clinic is:**

**\$597,912 / \$1,127,500 = .53 x cost of New Clinic**

Based on Denali Commission standard of evaluation; the remodel/addition costs are far lower than 75% of the cost of new construction. A new clinic is not recommended for this community.

\* Note: Village factors may have been adjusted for recent 2001 cost adjustments and may have changed from previously published data distributed to the villages.

## **VII. Conclusions and Recommendations**

The existing Alakanuk Clinic is new in year 2000 and is serving the community very well. Based on current ANTHC and YKHC delivery model for health care to rural Alaska, the facility is short 640 SF to meet these needs. An addition could be provided to the existing structure to meet those needs without extensive remodeling.

After careful review it is the recommendation of the consultant team that the existing new facility be provided with an addition to accommodate the needs of Alakanuk. The addition of approximately 640 SF of clinic space required by the current ARPCF Program Space Guidelines and the minor renovation and upgrading of the existing clinic space will cost .53 times the cost of a new clinic. This results in the recommendation of an addition to the existing facility.

We reviewed the options with the local community leaders the consensus was that the Addition to the Clinic would meet the current community needs and for years to come. In addition, they agreed and that the existing site can be used for the addition and it will fit easily.

The community believes this is a good solution and will produce the best return for funds invested in a clinic that meets the needs of Alakanuk community and is aggressively moving to assist in any way to accomplish this goal.

**Appendix A: Specific Deficiencies Listings**

The attached sheets represent the individual deficiencies identified for this project and the corrective action required to meet current codes and standards of construction. The deficiencies are further summarized in Section V. Summary of Existing Clinic Deficiencies.

**Appendix B: General Site Photographs**



**Aerial of Alakanuk Clinic**



**Exterior from Southeast**



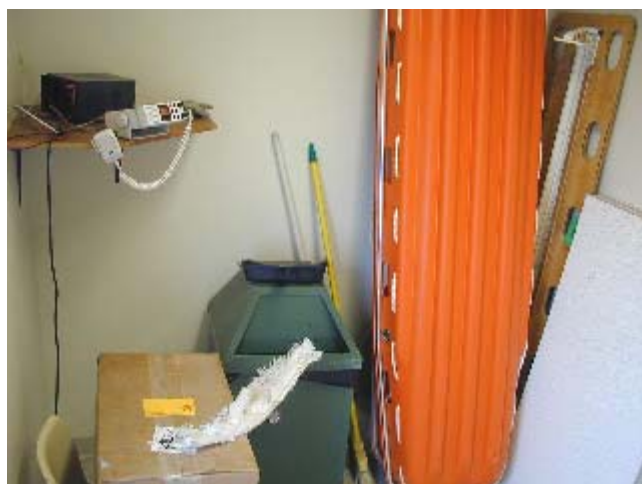
**Exterior from Northeast**



**Exterior from Northwest**



**Exterior from Southwest**



**Vestibule at Main Entry**



**Waiting to Trauma and Office**



**Waiting toward entry**



**Waiting to hall and other exam rooms**



**Office / Administration**





**Janitor Room**



**Pharmacy and storage**



**Trauma / Exam Room**



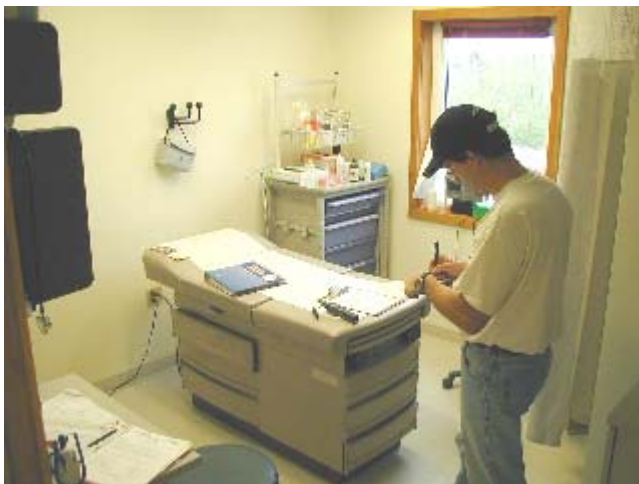
**Trauma / Exam Room**



**HC Toilet / Bathroom**



**HC Toilet**



**Exam 2**



**Exam 3**



**Exam 3**



**Exam 4**





**Exam typical sink and cabinets**



**Exam typical**



**Mechanical Room**



**Main Storage and Technology**

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